



UNITED STATES MARINE CORPS  
COMMANDING GENERAL  
BOX 788100  
MARINE CORPS AIR GROUND COMBAT CENTER  
TWENTYNINE PALMS, CALIFORNIA 92278-8100

CCO 3500.11D  
3A-101/njp  
29 Nov 95

COMBAT CENTER ORDER 3500.11D W/Ch 1, 2

From: Commanding General  
To: Distribution List

Subj: MARINE CORPS COMBINED ARMS EXERCISE (CAX) PROGRAM

Ref: (a) MCO 3500.11  
(b) CG MCCDC 031345Z OCT 95  
(c) CCO P3500.4

Encl: (1) CAX Schedule Guide  
(2) Conduct of the CAX  
(3) Command Relationships and Organizations  
(4) Directed Actions and Responsibilities  
(5) Concept of GCE, ACE, and CSSE Participation  
(6) CAX Rules of Engagement/Target Array  
(7) Standard Ammunition Requirements  
(8) CAX Terms/Definitions

Reports Required: I. Post Exercise Report (Report Symbol MC-3500-11), encl (4),  
par. 2f(1)  
II. Marine Corps Lessons Learned Systems (MCLLS)

1. Purpose. To publish guidance for the conduct of the Combined Arms Exercise program at the Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms, California.

2. Cancellation. CCO 3500.11C.

3. Background. Because of the increased degree of technical and tactical competence of each element of the combined arms team required for success on the modern battlefield, the Commandant of the Marine Corps (CMC), per reference (a), established the CAX program under the cognizance of the Commanding General (CG), MCAGCC.

4. Mission. The mission of the Combat Center is to administer and conduct a combined arms program in order to exercise and evaluate participating units in the command, control, and coordination of supporting arms in support of maneuver warfare. Implicit in this mission is the requirement to:

a. Provide guidance for the training of Marine Air Ground Task Forces (MAGTF) in fire support planning and coordination in consonance with maneuver.

b. To provide a scenario for realistic training under live fire conditions predicated on current real world opposition forces doctrine, tactics, and equipment.

c. Establish exercise control of all units and forces participating in the CAX.

d. Examine and evaluate current doctrine, and through the medium of the CAX, identify more effective means of fighting in a combined arms environment.

e. Provide housing, facilities, logistical and administrative support to CAX participants.

f. Establish positive control of the Combat Center's airspace, training areas, and live fire ranges

5. Training Goal/Objectives. The goal of the CAX program is the preparation of major elements of a MAGTF for success in combat in a mid-to-high intensity environment. This goal will be accomplished through achievement of the following objectives, the first two of which are listed in priority, with the remainder to be ranked by the Officer Conducting the Exercise (OCE):

a. Required Training Objectives

(1) Exercise fire support coordination in consonance with maneuver. Training priority will be placed on air-ground integration in a mechanized/countermechanized warfare environment. Units must be able to recognize the requirement for and integrate indirect fires and aviation concurrently on the same target while suppressing enemy air defense threats.

(2) Exercise the capability of each supporting arm to respond effectively to the requests of the supported unit.

(3) Exercise unit capability to integrate maneuver with direct and indirect firepower.

(4) Exercise the capabilities at all levels to conduct combined arms operations during periods of darkness and reduced visibility.

(5) Exercise the capability of the Combat Service Support Element (CSSE) to anticipate, plan and provide Combat Service Support requirements.

(6) Exercise Electronic Warfare capabilities and resources in combined arms operations to include realistic employment of signal intelligence.

(7) Exercise the capability to conduct combined arms operations in a nuclear, biological, or chemical (NBC) environment.

(8) Exercise organic tactical intelligence capabilities and the employment of Surveillance, Reconnaissance and Intelligence (SRI) Group assets.

b. Additional Training Goals. Additional training goals may be included if mutually agreed upon by the CG, MCAGCC and the Officer Scheduling the Exercise (OSE).

6. Training Type Level and Frequency

a. General. In order to provide training at the most basic level where coordination of supporting arms takes place, the focus of the combined arms exercises will be at the battalion/composite squadron level.

(1) Training will be realistic, live fire and emphasize the coordination and integration of supporting arms. In order to provide the Ground Combat Element (GCE) commander with the widest possible selection of fire support means, and to fully exercise his ability to integrate these means, a greater number of types of artillery and aviation assets are furnished than would normally be available to a reinforced ground combat battalion. No effort should be made to fit this unique exercise force structure into a description of normal MAGTF's. The exercise force

(EXFOR) is created solely to allow the GCE, Air Combat Element (ACE) and CSSE to be evaluated on their ability to coordinate a cross section of supporting arms and to provide necessary combat service support.

(2) Per reference (b), the OSE may elect one of two force levels for a CAX. Either a full up reinforced battalion and a Light Armored Reconnaissance Company, or one full up reinforced battalion and a battalion in the Tactical Exercise Without Troops (TEWT) mode may be chosen, but not both.

(3) The level of training is aimed principally at the reinforced battalion/composite aviation element and combat service support detachment. The exercise evaluation will be aimed at the GCE, ACE and CSSE. The evaluation of the MAGTF headquarters will be limited to the manner in which it affects the subordinate elements ability to conduct fire support coordination. Additional training objectives for the regiment or MAGTF and requests to evaluate those headquarters will be mutually agreed upon at the Letter of Instruction (LOI) conference. This conference between representatives of the exercise force and the TEECG will occur four to six months prior to the scheduled exercise.

b. The annual CAX participation level will normally be as follows:

Fleet Marine Forces Atlantic (MARFORLANT)	4 Bns
Fleet Marine Forces Pacific (MARFORPAC)	4 Bns
Marine Forces Reserve (MARFORRES)	2 Bns

c. The timing sequence for standard CAX's will be in consonance with the schedule established at the MCAGCC Annual Planning Conference.

## 7. Safety

a. The officer conducting the exercise and the operational chain of command of the exercise force are responsible for safety in the exercise force.

b. The live fire environment of the CAX Program compels each member of the EXFOR/MAGTF to understand and comply with requirements per [reference \(c\)](#). These regulations, if followed in letter and spirit, provide an environment that is both safe and open to sound doctrinal employment of all elements of the EXFOR/MAGTF.

c. On Tactical Exercise Evaluation and Control Group (TEECG) supervised events, the TEECG has the authority to mandate modifications to exercise force procedures to comply with the letter and spirit of reference (c) as modified in the Ground Safety Handout. However, no commander in the exercise force will be directed to implement a procedure or action that he considers to be unsafe. As the commander's responsibility for safety cannot be delegated or abrogated, he retains full authority to prohibit any activity or procedure.

8. Debrief. The intent of the debrief process is to educate all members of the EXFOR/MAGTF in the techniques and tactics of Combined Arms Operations. All participating members of the EXFOR/MAGTF will have an opportunity to review the entire CAX with members of the TEECG as well as with controllers who observed first hand all activities that occurred.

a. Methodology. Throughout the training period at MCAGCC, a debrief will be given for all observed or evaluated training events. The critique of the CAX is based on recorded observations of TEECG personnel and controllers assigned to each element of the EXFOR/MAGTF. As each event occurs, TEECG and controller personnel will record their observations for future reference. For example, upon termination of a particular pre-CAX training event, e.g., Range 400, the TEECG representative on the scene will provide an informal debrief. A formal debrief will be held subsequent to the termination of the CAX. The formal debrief consists of an

individual MOS debrief and a general debrief. The individual MOS debrief occurs the day after termination of the CAX. The general debrief EXFOR/MAGTF, occurs the following morning. During the individual MOS debrief, items are identified that will be discussed with the EXFOR/MAGTF during the general debrief. These items form the basis for an informal report to the MAGTF commanders.

b. Criterion. The evaluation will be based on the ability of the exercise force to accomplish both the training objectives contained in reference (a) and those that are agreed upon at the Letter of Instruction (LOI) Conference.

9. Concept of Combat Service Support (CSS) . Reference (a) discusses the concept of CSS in detail. Enclosure (7) identifies the minimum ammunition necessary for pre-Finex and CAX events that are common to all exercise forces participating in a CAX. Use of Exercise Support Division (ESD) equipment is established by the CG, MCAGCC. ESD equipment quantities available to the exercise force and SOPs for both the Equipment Allowance Pool (EAP) and Exercise Support Base (ESB) are routinely passed out at the LOI conference and are also available upon request from the Exercise Action Officer. The Equipment Allowance Pool located at MCAGCC, ESD will be the first source of equipment for a CAX.

10. Funding Procedures:

a. All CAX specific costs, other than SECREPs within the Standard Equipment Density List (SEDL) in reference (b) will be budgeted and funded by the OSEs (CG, FMFLANT; CG, FMFPAC; CG, MARFORRES) . Exercise funding requirements are an operating force's (Active and Reserve) responsibility.

b. Funding for CAX related costs, other than SECREPs within the SEDL will be passed to the supporting activity by establishment of reimbursable documents. Reimbursable funding documents are limited to one line of financial appropriation and must be provided to the Comptroller Directorate in sufficient time to reach DSSC reimbursable accounting classifications 60 days prior to the designated delivery date. At least five working days should be allowed for the MCAGCC Comptroller (Budget) to process reimbursable funding documents.

c. Requesting units and the Comptroller Directorate (Budget) will coordinate preparation and use of reimbursable accounting classifications in support of CAX requirements. Use of reimbursable documents facilitates capturing of total exercise costs, by exercise, for the respective Officer Scheduling Exercise (OSE)

d. The OCE will be responsible for financial reconciliation of reimbursable funding documents both during and upon completion of the exercise. The Comptroller Directorate (REA/Budget) will provide financial reconciliation support to the OCE.

11. Applicability. This Order is applicable to all commands and organizations aboard the Combat Center and all exercise force units participating in Combined Arms Exercises.

J. D. MAJCHRAZAK  
Chief of Staff

DISTRIBUTION: A-15 plus TEECG (200)



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CCO 3500.11D Ch 1  
3A-101/njp  
5 Jan 96

COMBAT CENTER ORDER 3500.11D Ch 1

From: Commanding General  
To: Distribution List

Subj: MARINE CORPS COMBINED ARMS (CAX) PROGRAM

Encl: (1) New page insert to CCO 3500.11D

1. Purpose. To transmit new page insert to basic order.
2. Action. Remove page 3 and 4 of enclosure (2) of the basic Order and replace with the corresponding page contained in the enclosure.
3. Filing Instructions. File this Change transmittal immediately behind the signature page of the basic Order.

J. D. MAJCHRZAK  
Chief of Staff

DISTRIBUTION: A-1 plus TEECG (200)



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CCO 3500.11D Ch 2  
3A-101/njp  
1 Aug 96

COMBAT CENTER ORDER 3500.11D Ch 2

From: Commanding General  
To: Distribution List

Subj: MARINE CORPS COMBINED ARMS (CAX) PROGRAM

1. Purpose. To direct a pen change to the basic Order.
2. Action. On page 5, paragraph 7.b, line 3 change reference (b) to read "reference (c)".
3. Filing Instructions. File this Change transmittal immediately behind the signature page of the basic Order.

MICHAEL F. JACKSON  
By direction

DISTRIBUTION: A-1 plus TEECG (200)

# CAX SCHEDULE GUIDE

1. The following table will be employed as a guide. (A = Arrival Day)

A- 140	Exercise Action Group (EAG) designated
A-135	Exercise Action Group/Exercise Action Officer (EAG/EAO) make initial liaison with Officer
(A-210 for USMCR)	Scheduling Exercise (OSE)
A-115 (A-195 for USMCR)	Message to OSE proposing LOI conference location and dates, also requesting designation and attendance of the MAGTF Command Element, GCE, ACE and CSSE
*A-125 (190 for USMCR)	OSE announces LOI dates and location. (190 for
A-110 (180 for USMCR)	LOI conference convened, TEECG representatives (180 for discuss scenario, meet with GCE, ACE and CSSE, USMCR) ESD provides brief on logistical requirements and provides OSE with the funded and unfunded Standard Equipment Density List (SEDL) and EAP/ESB SOP. OSE identifies force needed to reach minimum participation levels, unit training needs identified and major unit locations at MCAGCC selected.
A-104	LOI conference representatives return to MCAGCC
*A-100	MAGTF Command Element submits consolidated frequency request to MCAGCC Director, Communications and Data Directorate
*A-90	GCE, ACE and CSSE report for planning to MAGTF CE.
A-90	Class V(A) requirements submitted to CG, MCAGCC by ACE.
A-90	Class I requirements (B rations only) submitted to CG, MCAGCC by CSSE
A-90	Exercise force submits training area and range requests for desired pre-exercise training via Range Facility Management Support System (RFMSS)
A-90	The Head ESD provides (by MSG) to OSE/OCE, the availability/status of EAP equipment. ESD specifies what the Standard Equipment Package (SEP) will be for the particular CAX
A-90	The Head ESD notifies the OSE/OCE (by MSG) post CAX personnel augmentation requirements for the EAP
A-75	LOI published by OSE, Forces required to meet minimum levels of participation formally requested
A-75	TEECG augmentation requirements to OSE

ENCLOSURE (1)

CAX SCHEDULE GUIDE

A-65 CSSE submits reimbursable funding document to Comptroller, MCAGCC for establishment of reimbursable appropriation

A-60 Class V(W) requirements submitted to CG, MCAGCC by MAGTF CE

A-60 Standard equipment package (SEP) requirements submitted to CG, MCAGCC by MAGTF CE

A-60 MCAGCC makes formal request to I MEF for assets to meet minimum levels of participation

A-60 CSSE submits Class I requirements for A rations and MRES, and requests pickup dates for bill of material (BOM) and Class I supplies

A-60 TEECG reviews training area requests received at A-90 above, adds ranges required for mandatory pre-exercise and training and CAX, and forwards them to Director, Operations and Training, (O&T) MCAGCC

A-60 CSSE submits consolidated BOM with appropriation data and all consumable supply requirements to CG, MCAGCC

A-55 All range requests in to Director, O&T, (Range Scheduling), Other ranges will be returned to Range Scheduling

A-50 Exercise schedule rough to Director, O&T

A-45 Exercise schedule published

A-44 TEECG submits requests for reconstruction of targets. Coordinate with Range Management Officer

A-40 OSE provides augmentees names and RUC's to TEECG

A-30 OCE submits name of Responsible Officer (RO) for the EAP and ESB (must be a field grade officer)

A-30 Memo to Installations and Logistics (I&L) for working parties

A-30 EAO checks status of Equipment Allowance Pool (EAP) and Exercise Support Base (ESB), and coordinates turnover of ESB between outgoing/incoming units

A-30 MAGTF CE submits transportation requirements to CG, MCAGCC

A-30 Request submitted to Explosive Ordnance Disposal (EOD) for sweep of training areas to be completed prior to A-b and for dud lecture to be provided to exercise force

A-30 Exercise force standard operating procedures (SOP's), operations orders (OPORD's) and administration/logistics plans (admin/log plans) arrive at TEECG

A-25 Schedule conference rooms for pre-exercise briefs and post-exercise critiques, obtain classrooms for MOS debriefs

ENCLOSURE (1)



CAX SCHEDULE GUIDE

A-25	Schedule CG, MCAGCC, for opening remarks. Coordinate with Director, Operations and Training(TVISC) for video/communications support in conference rooms
A-6	Advance party arrives and meets with Exercise Action Group
A-7	Exercise force draws Class V(W) and V(A)
A-7	OCE submits all contracting requests for portable heads, dumpsters, ICE and rental vans
A-7	The OSE/OCE provides to the Head ESD a serialized listing of equipment that will be transported to MCAGCC or temp loaned from CG, I MEF for use during the CAX
A-2	Draw support vehicles, complete limited technical inspection (LTI)
A-1	Inspect quarters as required
A-Day	CAX force main body arrives
A+1	Range 400 series orientation, orientation briefings/SOP and CAX schedule review; Indirect Fire Controller check-in
A+2	FAC/FO School; Mobile Assault Course Orientation classes on FIST procedures, EA building and breaching operations in a mechanized environment
A+2 - A+6	Range 400 Series
A+3 - A+4	Air Support Coordination Exercise, Phases I and II
A+5	Fire Support Coordination Exercise I
A+6 - A+7	Combined Arms Staff Trainer (CAST)
A+7	Controller check-in; Controller School
A+8 - A+11	Mobile Assault Course
A+12	Fire Support Coordination Exercise II
A+13	Fire Support Coordination Exercise III
A+14	Regt/MAGTF Combined Arms Staff Trainer (Day 1 FINEX)
A+15	OCE conducts range sweep and control of exercise area and air space is passed from MCAGCC to exercise force
A+16	Live fire evaluated CAX
A+17	Live fire evaluated CAX
A+18	Live fire evaluated CAX

ENCLOSURE (1)

# CAX SCHEDULE GUIDE

A+18                    Upon completion of evaluated CAX, OCE initiates procedures for returning control of airspace and training areas to Bearmat per Combat Center Order P3500.4, SOP for Range Training Areas and Airspace Management

A+19                    MOS Debrief

A+19                    OCE conducts financial reconciliation with Comptroller Directorate (Budget)

A+20                    General Debrief

A+21                    CAX force main body departs

\*Recommended dates/actions

2. The standard CAX conducted at MCAGCC will consist of the following training events:

<u>Event</u>	<u>Number of Days*</u>			
	INF BN &	LAR CO	INF BN &	TEWT BN
Orientation Briefings	1		1	
Combined Arms Staff Training	3		4	
Range 400 Series for Small Unit Training	5		5	
Mobile Assault Training	4		4	
ASCEX Training	2		4	
Fire Support Coordination Exercises	3		4	
Controllers' School	2		2	
Final Exercise	3		3	
Controller Debrief/Informal Critique	1		1	
MOS Debrief	1		1	
General Debrief	1		1	
Comptroller financial reconciliation	1		1	

\*Number of days required is approximate and will depend on the level of training of the exercise force. The specific number of days will be agreed upon at the LOI conference. In general the standard CAX with an LAR company is 22 days in length and with a battalion in the TEWT mode, 25 days in length.

ENCLOSURE (1)

## CONDUCT OF THE CAX

1. The CAX program is intended to prepare an exercise force/MAGTF (EXFOR/MAGTF) for combat by emphasizing the coordination and integration of supporting arms with maneuver forces.

2. Phase I, Pre-FINEX Training. This period of training is characterized by intensive training of the entire MAGTF, both as individual elements and joint members of the combined arms team. During this period, much of the training occurs concurrently, with portions being required by the CG, MCAGCC and portions remaining optional to the commander and his subordinates.

a. SOP Review. A thorough review of the MAGTF CE/Battalion SOPs occurs soon after the arrival of the command element. Each section of the TEECG reviews relevant portions of the SOP for the specific purposes of (1) ensuring the SOPs are in line with current doctrine, (2) reconciling differences, (3) detecting possible omissions in the SOP, (4) offering recommendations to aid in clarifying the SOP, and (5) offering suggestions from experience gained in previous CAX's that will assist in providing a safe environment in which to conduct the CAX.

b. Maneuver Element Training. The pre-CAX training period for the battalion consists of both individual unit usage of MCAGCC's wide variety of live fire ranges and maneuver areas, and several required training evolution's that are designed specifically to prepare units for combined arms operations.

(1) Ranges 410A, 410 and 400. This series of ranges provides the company with an opportunity to use all of its organic weapons, attached engineers, heavy machine guns and mortars as well as STA teams, in the support of infantry attacks on several types of opposition force defensive positions. Detailed training information concerning these ranges will be distributed at the LOI conference. In addition, each range will be briefed both on Range 400 orientation day and on execution day. The Range 410A and Range 400 evolutions will be evaluated by TEECG personnel, and successful completion of these ranges is a requirement prior to participation in a CAX.

(2) Armor Training. Tank and LAR units are required to conduct Table VIII gunnery during the pre-CAX training period. The TEECG Armor Representative will be available for any assistance requested by the armor element of the MAGTF.

(3) Mobile Assault Course Training. A live fire mobile assault maneuver area is available to the GCE during the pre-CAX training period to allow maneuver elements the opportunity to practice the techniques of mechanized, combined arms fire maneuver and breaching techniques at the company level. TEECG personnel will brief the training evolution during the MAC orientation class and will be on the scene to provide assistance and evaluation. Completion of the Mobile Assault Course is a requirement prior to participation in the CAX Final exercise.

c. ASCEX. ASCEX offers the ACE and GCE their first opportunity to conduct intensive fixed wing and rotary wing CAS training jointly. The TEECG will provide the exercise force a recommended training schedule that uses a "building block" approach to prepare the exercise force for the integration of air into fire support plans. The TEECG will provide appropriate scenario, targets and problems that will enable the exercise force to practice the coordination of all supporting arms in a live fire, static environment. Emphasis will be placed on air-delivered ordnance, suppression of enemy air defense (SEAD) fires and target marking, using a sophisticated threat scenario. ACE participants will include fixed and rotary wing CAS aircraft, FAC (A) aircraft and DASC. GCE participants will include TACP's air

ENCLOSURE (2)

## CONDUCT OF THE CAX

officer, artillery FO teams, 81mm mortar FO teams, one AAVC-7A1 with all members of the battalion FSCE, one 81mm mortar section, an artillery fire direction center (FDC) and firing battery, and all doctrinal communication support. The TEECG will provide a debrief for all participants at the completion of each phase of the ASCEX.

d. FSCEX I-V. The purpose of the FSCEX is to develop the fire support coordination skills of the GCE in a building block approach. All of the FSCEX are TEWTed events involving no direct fire. They are described below:

(1) FSCEX I is designed to teach the company level Fire Support Team (FIST) the principles of indirect fire deconfliction and fire support coordination.

(2) FSCEX II is a battalion movement to contact. It is designed to reinforce the skills the FIST learned in FSCEX I and provide the battalion with the opportunity to exercise fire support planning, command and control, and fire support coordination.

(3) FSCEX III incorporates the LAR company as a screening/security force forward under the MAGTF control and a battalion defending in sector. A battle handover is part of the scenario.

(4) FSCEX IV is a movement to contact designed for a MAGTF with two maneuver battalions. The emphasis is on allocation and deconfliction of fires at the regimental/MAGTF level.

(5) FSCEX V is similar to FSCEX IV except the scenario involves a defense in sector with two battalions abreast. The emphasis is on battalion engagement areas and allocation and deconfliction of fires at the regimental/MAGTF level.

(6) The goal of the FSCEX is to exercise the fire planning, FSCE procedures and SOP's developed. Immediate missions and targets of opportunity should be anticipated. All close air support planned for each of the phases will be incorporated with DASO participation. Ammunition expenditure will be limited, but each firing element will fire at least one round per mission with no constructive fire missions. Minimum safe lines (MSL's) are provided by the TEECG to support the FSCEX with recommended artillery positions. TEECG will provide detailed briefings (on site), during the exercise, to provide assistance and a critique. Each FSCEX, except for FSCEX I will be preceded by a Combined Arms Staff Trainer (CAST) exercise to rehearse and refine the unit's plan.

e. Reat/MAGTF CAST. The purpose of this CAST is to enable the exercise force to execute their plan for Day 1 of the FINEX in the CAST. This allows the TEECG staff an opportunity to familiarize themselves with the MAGTF's plan and allows all elements of the MAGTF to identify areas of their plan requiring refinement prior to the actual execution on the desert floor. It is conducted in lieu of a sandtable brief.

3. Phase II. Execution of a CAX. The scenario for the CAX will be a standard TEECG Scenario unless a different scenario is agreed to at the LOI conference. In the TEECG scenario the enemy situation encountered by an EXFOR during a CAX will represent a force disposed according to current real world opposition forces incorporating tactics, techniques and equipment. The enemy portrayal is designed to allow the EXFOR to gain a degree of realism and an opportunity to apply Marine Corps doctrinal techniques of fire support coordination in support of maneuver. The EXFOR should be prepared to execute deliberate and hasty attacks, movements to contact,

ENCLOSURE (2)

#### CONDUCT OF THE CAX

defenses with forward delay positions and night movements. Maneuver and fire support coordination tasks associated with these actions include:

(a) Maneuver Tasks

- (1) Flexibility in employment of combat power.
- (2) Mutual support among maneuver elements (cross boundary fire procedures)
- (3) Control of antiarmor assets and heavy machine gun (HMG) sections.
- (4) Mounted and dismounted assaults.
- (5) Reserve positioning and employment.
- (6) Minefield breaches.
- (7) Security for low altitude air defense (LAAD) elements.
- (8) Effective communications: command post location, retransmission sites or radio relay and use of other means of communications.
- (9) Responsive logistic support: contact teams, emergency ammunition resupply procedures and evacuation procedures.
- (10) Task organization of forces.
- (11) Coordinated barrier planning.
- (12) Tank support of dismounted infantry attacks.
- (13) Penetration of a strongpoint position.
- (14) Trenchline clearing.
- (15) Helicopterborne assaults.
- (16) Advance guard operations (hasty attacks and immediate action/battle drills to maintain momentum).
- (17) Maintain reconnaissance elements in position to provide timely observation of axis of advance (at least until contact with the enemy is established).
- (18) Employment of antiarmor assets.
- (19) Employment of range cards or all crew-served direct fire weapons.
- (20) Air defense.
- (21) Placement of intelligence assets to allow timely warning of the enemy counterattack.
- (22) CSS support (service areas, distribution points, evacuation points, traffic control and engineer equipment).

ENCLOSURE (2)

(23) Ground and aerial route reconnaissance.

(24) Task organization of elements in preparation for night movement and follow-on delay/defend operations.

(25) Planning and conduct of a mechanized night movement.

(26) Assignment of mutually supporting delay positions.

(27) Task organization of delaying elements.

(28) Maneuver control of delaying elements.

(29) Section of routes between delay positions.

(30) Procedures for covering obstacle gaps by delaying elements.

(31) Employment of helicopterborne antiarmor assets.

b. Fire Support Coordination Tasks

(1) Each target must be analyzed to determine which supporting arm and what type and amount of munitions is best suited for obtaining the commander's desired effect upon that target.

(2) Each supporting arm must determine and coordinate its requirements to support the planned maneuver. Examples include primary positions, communication means, ammunition resupply, aircraft control points, and air refueling requirements.

(3) Coordinating instructions, control measures, and procedures must be developed and employed to support maneuver safely and effectively. Examples include permissive measures, coordinated fire line (CFL), fire support coordination line (FSCL) and free fire area (FFA); restrictive measures, restricted measure, restricted fire line (RFL), restrictive fire area (RFA) and no fire area (NFA), assignment of fire mission priorities, rotary wing CAS employment (routing, attack, positions, firing points, marks, and forward area refueling point), LAAD employment, procedures for firing series and group targets disseminating time hacks, immediate smoke, and immediate suppression.

(4) Coordinating instructions and procedures must be deployed and employed once the supporting arms to ensure their safe and effective integration. Examples include SEAD fires, marks for air targets and procedures for immediate CAS missions.

(a) As the exercise force completes the above task, the strikes on the target array will be observed by controllers present with each maneuver element.

(b) Final resolution authority over questions or conflicts of target destruction rests with the TEC, TTECG.

(5) A reconnaissance and surveillance plan capable of acquiring and tracking the enemy force must be developed and implemented. Examples include aviation reconnaissance, reconnaissance teams, UAV's and sensors.

(6) Procedures to mass fires on a moving enemy force must be developed and employed effectively.

(7) Air fires must be integrated with other supporting arms.

ENCLOSURE (2)

(8) Artillery munitions that are effective against armored vehicle must be integrated into the fire plan.

(9) Illumination fires must be coordinated to ensure minimum loss of destruction fires, adequate illumination at the necessary times and minimum interference with aircraft.

(10) Final protective fires must be planned and their registration must be coordinated with maneuver forces.

(11) Fire Support Planning for a helicopter borne assault must be conducted.

(12) The displacement of surface-delivered supporting arms must be coordinated to ensure continuous coverage of maneuver elements. All firing agencies (artillery, mortars, and NGF) must time displacements to be in position ready fire without causing maneuver elements to delay unnecessarily in attack positions.

(13) During movement to contact all supporting arms must be coordinated to provide very responsive support. Examples include aircraft on strip alert, aircraft on airborne alert with KC-130 refueler available, rotary wing CAS employment by the advance guard and immediate suppression/smoke procedures.

(14) The massing of all fires on a strongpoint must be coordinated and controlled to ensure maximum effect on target and maximum survivability of supporting arms. Examples include coordinated attacks with sophisticated munitions by air and artillery to destroy enemy air defenses, massed air fires within the preparation fires while employing an ACA, and terminal control of aircraft by well-positioned FAC's.

(15) Fire plans must emphasize close-in and continuous fire support to enable maneuver forces to close with the enemy without suffering unnecessary casualties. Of particular importance are mortar screening fires and rotary wing CAS.

(16) Fire support planning to support a mechanized night movement.

(17) Artillery must have positions well-forward to support the delaying elements and positions in-depth to support the final defensive positions. High speed and, if possible, covered routes must exist between positions to minimize the time artillery is out of action because of displacement and the chance that artillery might be cut off by rapidly advancing enemy forces.

(18) All supporting arms must be responsive to the requests of the delaying elements. procedures similar to those of the coordinated attack must be developed and employed. Examples include immediate CAS, informal ACA's, and immediate suppression and smoke missions.

(19) The employment of rotary wing CAS and the helicopter insertion/extraction of STA, RECON and communications assets must be coordinated with surface-delivered fires.

(20) Counterfire programs must be planned and, if necessary, fired.

4. Phase III, Post CAX After Action Review Process. The sole intent of the evaluation system is to educate Marine in the techniques of fighting in the Combined Arms Arena. Consequently, all aspects of live fire CAX, to include certain pre-training, e.g., Range 410, Range 400, TACP, FSCEX and ASCEX will be informally evaluated by the appropriate section(s) of the TTECG staff. The evaluation will be based on the ability of each subordinate element of the exercise force to achieve the training objectives established by reference (a) as will be briefed to selected

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members of the EXFOR/MAGTF upon conclusion of the exercise and provided in an after action debrief.

a. The evaluation system, developed by the CG, MCAGCC, and implemented by TTECG, will be predicted on tasks outlined in paragraph 8b of this Order and will conform to the following guidelines:

(1) Evaluation will be based upon the CAX force's ability to meet specified performance standards that relate directly to the accomplishment of training objectives.

(2) The entire exercise force (minus MAGTF command element) will be evaluated on all aspects of the exercise by TTECG members representing the various battlefield operating systems, I.e., Maneuver, C3I, Mobility/Counter mobility/Survivability, etc.

(3) Marine Corps doctrine, other U.S. Service's doctrine, as well as current concepts as expressed in MCCDC publications will be used to establish the performance level for all requirements.

(4) In order to achieve an accurate, detailed and meaningful evaluation, an EXFOR/MAGTF normally consisting of one reinforced infantry battalion, an LAR company or TEWT battalion, a composite aviation squadron and a combat service support element will be evaluated at one time.

b. MCAGCC/MCCRES Interface. Marine Corps Order 3501.1B, Marine Corps Combat Readiness and Evaluation System (MCCRES), provides mission performance standards (MPS), evaluation structure, and reporting procedures to be utilized in evaluating tactical exercises. Applicable MCCRES MPS will be used as a basis for evaluation of CAX's as well as additional performance standards developed by the CG, MCAGCC. MCCRES evaluations are not part of a building block approach and should not be done in consonance with a CAX.

ENCLOSURE (2)



COMMAND RELATIONSHIP AND ORGANIZATIONS

1. Command relationship terms are defined as follows:

a. Command. The authority which a commander in the military service lawfully exercises over subordinates by virtue of rank or assignment. Command includes the authority and responsibility for effectively using available resources and for planning, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions.

b. Responsibility. The obligation to carry forward an assigned task to a successful conclusion. With responsibility goes the authority to direct and take the necessary action to ensure success.

c. Exercise Control. The process of regulating, directing, and guiding the exercise so that its conduct is kept within prescribed limits and the training goals are accomplished.

d. Exercise Coordination. The authority to conduct liaison and coordination for the purpose of planning, executing and supervising an exercise.

e. Operational Control. Those functions of command involving the composition of subordinate forces, the assignment of tasks, the designation of objectives and the authoritative direction necessary to accomplish the mission. Operational command should be exercised by the use of the assigned normal organizational units throughout the commanders of subordinate forces established by the commander exercising operation command. It does not include such matters as administration, discipline, internal organization and unit training except when a subordinate commander requests assistance. (The term is synonymous with operational control and is uniquely applied to the operational control exercised by the commanders of unified and specified commands over assigned forces).

2. Functional titles are defined as follows:

a. Officer Scheduling the Exercise (OSE). The commander responsible for designating the forces to participate in a CAX, for establishing the scope of the exercise and for defining the command relationships involved.

b. Officer Conducting the Exercise (OCE). The OCE is designated by the OSE and is the senior officer in command of the EXFOR/MAGTF. In the case of a standard CAX, the OCE provides the function of command element and senior GCE headquarters. Responsible for financial management of reimbursable funding.

c. Tactical Exercise Controller (TEC). The TEC plans the exercise scenario and tactical environment, including enemy forces, in which the exercise is conducted. The TEC is assigned by the CG, MCAGCC and is normally the Director of TTECG.

d. Tactical Exercise Evaluation and Control Group (TEECG). The organization under the command of the TEC which is formed to control and evaluate each exercise. It is through this organization that the actual evaluation, critique and after action report is prepared.

e. Exercise Force/MAGTS. The EXFOR/MAGTF will consist of the following:

(1) The Command Element. The command element is a task-organized headquarters that exercises operational control of the GCE, ACE, and the CSSE during the exercise. It is designated by the OSE prior to the LOI conference.

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(2) The Ground Combat Element (GCE). The GCE is a task organized force tailored for the conduct of ground operations. It is constructed around a ground unit, battalion or larger, and includes appropriate combat support and combat service support units.

(3) The Aviation Combat Element (ACE). The ACE is a task organized force with organic units necessary to conduct air operations, air defense, air control and combat service support peculiar to aviation.

(4) The Combat Service Support Element (CSSE). The CSSE is a task organized unit providing combat service support beyond the capabilities resident in the GCE, and ACE, and to the TEECG.

3. The CG, MCAGCC, is responsible for the overall operation of the Combat Center and has exercise control over the EXFOR/MAGTF.

4. The OSE (CG, FMFPRAC OIC; CG, FMFLATN; CG, COMMRFORRES is responsible for organizing the EXFOR/MAGTF with a command element, a GCE, an ACE, and a CSSE. MAGTF's formed and deployed for CAX's will be under the command of the OSE.

5. The OCE will report to the CG, MCAGCC, for exercise control.

6. The responsibilities for control of all air operations at the EAF rests with the Commanding General, Third Marine Air Wing per reference (c).

7. Flight Operations at the EAF will be conducted under the provisions of reference (c).

8. The following exercise reporting instruction will be followed:

a. The commander of the MAGTF will report to the CG, MCAGCC for exercise control only.

b. MAGTF elements (i.e., CE, GCE, ACE, CSSE) will report for planning and exercise control to the OCE at dates to be determined at the LOI conference.

c. Personnel assigned to augment the TEECG for specific exercises will report to the TEC (Attn: TEECG Admin Section) upon arrival at the Combat Center. Order for such personnel should specify field duty, when appropriate, per Marine Corps Order P4650.37B, Marine Corps Travel Instructions Manual. Personnel designated as "Clones" who are being training to control and evaluate an exercise will report with fully funded order. The requirements for controllers and evaluators (Clones) will be an item that will be resolved at the LOI conference.

ENCLOSURE (3)

DIRECTED ACTION AND RESPONSIBILITIES

1. CG, MCAGCC, controls the conduct of exercises held at the Combat Center. he will be assisted primarily by the Director, O&T.

2. Director, O&T will:

a. Organize and maintain a permanent TEECG nucleus staff per Tables of Organization (T/O's). The TEECG nucleus T/O will include expertise in the major occupational field necessary to accomplish the MCAGCC mission, and will be augmented by controllers and other personnel from the parent commands of the exercise force as required.

b. Host, on behalf of CMC, an Annual Planning and Scheduling Conference at the MCAGCC, Twentynine Palms, California normally during the 1st quarter of the fiscal Year. During this conference, representatives from Headquarters Marine Corps (HQMC) and all force and Division/Wing/FSSG level commands participating in or supporting combined arms exercises will review training operations, procedures and requirements, and make appropriate conference recommendations to CMC. The conference will develop and coordinate the exercise schedule for the current fiscal year (FY) and tentative schedules for the two out years. This schedule will be provided to MCCSC for subsequent publication as a Marine Corps Bulletin.

c. Establish and maintain a repository of records and reports, SOP's, and other directives pertinent to the MCAGCC exercise and training programs. Periodically review and update SOP's to reflect changes in FMF Tables of manpower Requirements (T.MR's), T&E, doctrine, tactics and techniques.

d. Create an environment where innovative ideas may be tested under simulated combat conditions.

e. Prepare the following reports for submission by CG, MCAGCC to CG, MCCSC (T&E:

(1) Within 45 working days of the departure of each exercise force, a Post Exercise report. (Report Symbol MC-3500-11). This report will evaluate the training benefits derived, comment on lessons learned, and identify deficiencies in equipment, training and doctrine. This report will be sent to CG, MCCDC and the OSE.

(2) AS required direct the input of lessons learned in MCLLS for the Marine Corps-wide distribution.

f. Publish an exercise bulletin for each exercise which will contain the TEECG training schedule and the schedule for the pre-FINEX, CAX, and post-CAX activities.

3. Director, Communications and Data (C&D) Directorate will provide and/or coordinate with TEECG

a. Maintenance and technical support for commercial radio assets.

b. HF/VHF/UHF frequencies.

c. Assignment of personnel (OCCFLD 2500).

4. The TEC will:

a. Serve as the senior evaluator within TEECG during all phases of the CAX program.

ENCLOSURE (4)

b. Direct the efforts of the TEECG and augmentation personnel in the evaluation of each EXFOR/MAGTF during the pre-FINEX training, during the conduct of the CAX and during all pre-FINEX activities. Act as the principal drafter of the FINEX scenario.

c. Serve as the final authority in conflict resolution during the conduct of the CAX.

d. Serve as the command representative during the critique process.

e. Record, collate and report the observation of TEECG and controller personnel to the CG, MCAGCC via Director, O&T.

f. Serve as an advisor to the EXFOR/MAGTF commander when required and/or when requested in matters germane to the CAX program.

g. Serve as the principal drafter of the general debrief document and the Post Exercise Report. Also, serve as the moderator during the general debrief.

h. Publish detailed documents outlining the control and evaluation procedures to be used for combined arms exercises, formal instructional materials and the internal procedures of the TEECG. These lesson plans will be sufficiently detailed and specific so that performance standards and tasks are clearly established for the exercise force.

5. The TEECG nucleus staff will:

a. Assist the TEC, in the evaluation of each element of the MAGTF during the conduct of the CAX, I.e. the armor representative, TEECG, evaluated the tank heavy team of the EXFOR/MAGTF; the aviation representative evaluates the performance of the ACE, etc. Each member of the TEECG nucleus staff will report his observations and points of critiques to the TEC. Collectively, the TEECG nucleus staff will review each item and determine its educational value for the EXFOR/MAGTF, incorporating only those items of instructive merit in the General Debrief and Post Exercise Report. Although the TEC, assisted by the TEECG nucleus staff, is the principal drafter of the Post Exercise Report, the CG, MCAGCC, is the final authority on its content.

b. Develop exercise scenario and corresponding intelligence data to be used during the exercise based on current opposition forces tactics and equipment.

c. Coordinate the scheduling of and participate in an LOI conference at the location of the exercise force approximately 110 days prior to each exercise. (180 days prior for a USMCR CAX)

d. Organize the augmentation force and controllers, and conduct such orientation and training as is required to adequately monitor, evaluate, and provide a critique of all phases of the exercise.

e. Conduct a pre-FINEX program of instruction for each exercise force. This program will include meetings with the GCE, ACE, and CSSE at the LOI conference to determine levels of training, to provide intelligence update and threat information, and to recommend training which can be accomplished at the home location of the exercise force. The pre-FINEX training at MCAGCC will be mutually agreed upon between the MCAGCC representative and the OSE at the LOI conference. The extent and content of this training will depend upon the training level of the exercise force. It will be principally aimed at ensuring a basic standard of ability prior to the beginning of the evaluated portion of the exercise. In any case, it will address Fire Support Coordination training for the Staff, live fire and maneuver training

ENCLOSURE (4)

for reinforced rifle and tank companies, integrated training for attachments (tanks/infantry, air, arty, TACP, etc.), safety briefings, controllers school, and a detailed review of unit SOPs and OPORD's.

6. The Command Element will:

a. Be structured as an austere headquarters and staffed to provide the following functions:

(1) Receive, consolidate and pass to the ACE requests from the GCE for preplanned air.

(2) Keep the DASC informed of friendly positions with emphasis on the forward edge of the battle area (FEBA) and locations of firing batteries

(3) Keep the DASC informed of fire support coordination measures (FSCL, CFL, ACA's, etc.) in effect.

(4) Pass intelligence concerning enemy activities to the GCE, ACE, and DASC.

b. Act as a single point of contact between MCAGCC and the exercise force for pre-FINEX planning and exercise activities.

c. Assume control and coordination of the training areas in which the exercise force operates during the CAX, as well as the MCAGCC air space (R2501), per Combat Center Order 3120.4, SOP for Units Training at the Combat Center.

d. Assume Operational control over the entire EXFOR/MAGTF, including those forces not designated by the OSE but provided through the CG, MCAGCC. These forces may include:

(1) The artillery furnished from FMF assets which will provide the exercise force with artillery support to supplement the direct support artillery elements supporting the exercise force. FMFLANT personnel may utilize FMFPAC weapons as stated by mutual agreement.

(2) Artillery units simulating naval gunfire.

(3) The ACE that will provide helicopter, fixed-wing, and air command and control support, as required.

(4) Armor, antiarmor, assault amphibian, and communications support from I MEF assets may be provided to the exercise force at the request of the OSE.

7. EXFOR/MAGTF Explosive Ordnance Disposal (EOD) Unit.

a. Per reference (a), EXFOR/MAGTF EOD are to augment the MCAGCC EOD unit. However, to maintain unit cohesiveness, EXFOR/MAGTF EOD teams will remain attached to their parent organizations.

b. EXFOR/MAGTF EOD teams will be responsible for reporting to the MCAGCC EOD Unit upon arrival to receive an in-brief on MCAGCC Range Regulations and specific guidance concerning EOD operations and training while aboard the MCAGCC.

c. As required, EXFOR/MAGTF EOD teams are responsible for all EOD support to the exercise force. To ensure safe effective and efficient EOD support and to avoid duplication of effort, EXFOR/MAGTF EOD teams will coordinate all their activities through the MCAGCC EOD Unit.

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d. Prior to departure from the MCAGCC, EXFOR/MAGTF EOD teams will provide the C+MCAGCC EOD Unit with a post-operations report of all operations training accomplished during the CAX.

8. Based on the annual schedule, the appropriate headquarters (COMMARFORPAC, COMMMARFORLANT, COMMARFORRES) will publish an LOI to designated subordinate commands. The LOI should include the designation and composition of the exercise force, special exercise objective, and maneuver areas, required TEECG augmentation personnel and equipment, command relationships, fiscal responsibilities, detailed exercise schedule, and other special instruction. For the Regular establishment, LOI's should be published no later than 75 days prior to the arrival of the exercise force. The LOI for Reserve exercises should be published no later than six months prior to the arrival of the exercise force, due to the limited amount of Reserve training time available each year.

9. Upon receipt of the LOI, the appropriate commands (division/regiment, wing/group, force service support group, etc.) will normally publish activation directives and operations orders, as appropriate. A copy of the operation order and all SOPs pertaining to fire support and fire support coordination published by the exercise force must be in the hands of TEECG no later than 20 days prior to the arrival of the exercise force so that planning can be completed in a timely manner.

10. Subordinate commands of the exercise force, will publish exercise operation orders as required. A copy of these orders should be forwarded to the TEECG as soon as they are published. Command and organizational SOP's that amplify the procedures found in FMFM's should be made available to the TTECG at least 30 days prior to the exercise.

ENCLOSURE (4)

CONCEPT OF GCE, ACE, AND CSSE PARTICIPATION

1. This enclosure prescribes the tasks and structures of a GCE, ACE, and the CSS participation in conduct of a battalion-level CAX.

2. Concept

a. GCE. The GCE will normally be an infantry battalion reinforced tanks, artillery, AAV's and TOW's engineers, and other attachments prescribed by the OSE. Tasks assigned to the GCE are discussed in enclosure (2) of this Order.

b. ACE. The ACE will be structured to resemble an independent Marine Aircraft Group and task organized to provide required aviation support to the entire EXFOR/MAGTF. Aircraft and support assets that are forward based by doctrine will operate from the EAF while involved in a CAX.

c. CSS Participation. The combat service support participation in a CAX will be provided from both a CSSE organic to the EXFOR/MAGTF and other support as required from the MCAGCC and I MEF assets. The CSSE will be structured to best support the needs of all elements of the EXFOR/MAGTF.

3. ACE Task

a. The ACE will possess sufficient assets to perform the functions of Marine Aviation as listed below.

(1) Air Reconnaissance. Armed recon and forward observation.

(2) Anti-Air Warfare

(a) LAAD element close-in air defense.

(b) Optional employment of anti-radiation missiles and laser guided bombs based upon OSE determination of training requirements.

(3) Assault Support

(a) Day and night vertical assault airlift.

(b) Helicopterborne assault defensive fires.

(c) Optional employment of inflight aerial refueling assets.

(4) Offensive Air Support

(a) Day and night fixed and rotary wing CAS.

(b) Optional employment of air delivered smoke based upon OSE determination of training requirements.

(c) Optional employment of air delivered illumination.

(5) Electronic Warfare

(a) ECCM to retain effective communications.

(b) Optional employment of ECM based upon OSE determination of training requirements.

ENCLOSURE (5)

(6) Control of Aircraft and Missiles

(a) The DASC function will be performed by an air control element responsible for all tasks per FMFM 5-1, paragraph 2106 and FMFM 5-60, paragraph 1002.

(b) The TACC function will be performed by the air control element and may be limited to assisting the ACE in coordinating the use of aircraft by the DASC and the maintenance of status displays of friendly air operations, detected threats and air defense weapons conditions.

b. The ACE will provide the following additional support:

(1) Twenty-four hour medevac capability for MCAGCC.

(2) Augmentation of the EAF as required.

(3) Priority helicopter lifts to support the TEECG observation posts (OP's).

c. Structure

(1) The ACE can be task organized with units of various commands. However, the commander of the ACE will be designated from an aviation component of the OSE.

(2) The following aviation elements are considered essential to support the objectives of a single battalion CAX.

(a) Det, VMA/VMFA/VMFA (AW) to support a minimum of six available aircraft and an average of 12 sorties a daily. In the case of Division/MEF (Forward) CAX, 16 sorties daily will be required.

(b) Det to support a minimum of three available aircraft for SAC(a), FAC(A).

(c) Det, HMM/HMM to support a minimum availability of five CH-53 or a mix of three CH-53 and four CH-46. In the case of a Division/MEF (Forward) CAX, the requirements will be six CH-53's and eight CH-46's.

(d) Det, HMLA to support an availability of four AH-1's for a single battalion CAX and eight for a Division/MEF (Forward) CAX.

(e) Det, HMLA to support an availability of three UH-1 for a single battalion CAX and six UH-1's for a Division/MEF (Forward) CAX.

(f) Det, MACG to provide the air control and LAAD elements.

(g) Det, MWSS to provide Aviation Ground Support (AGS) to the Aviation Combat Element.

(3) The following aviation elements are considered appropriate to support the objectives of a CAX.

(a) Det MWSG.

(b) Det MWCG.

(c) Det H&MS.

(d) Det MATCS.

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(4) The OSE may task organize aircraft mixes to support training goals of a specific CAX. However, aircraft mix should not dilute the overall capability to support the GCE, particularly in helicopter lift capability.

(5) The Strategic Expeditional Landing Field (SELF) is manned by 3d MAW to allow flight operations during normal working hours (0800-1600 Monday through Friday). The ACE must plan to provide personnel augmentation to support extended operating hours.

d. Aviation Safety

(1) An aviation safety officer will be assigned from an aviation component of the OSE to the ACE special staff. The ACE aviation officer will participate in the planning and execution of all aviation related matters, ensuring that aviation safety considerations are included in all applicable phases of the CAX. Additionally, he will advise the ACE Commander of all hazards and/or deviations from established flight discipline.

(2) Prior to supporting the GCE, all naval aviators, naval flight officers, naval aerial observers and air control officers must attend a range safety brief provided by TEECG.

e. Weather Service. Weather briefings are available from the AGSE Weather Service via DSN 957-7820.

f. Aviation Weapons Support Equipment (AWSE). Limited AWSE may be available from AGSE. Maintenance personnel augmentation and some peculiar SE must be provided by the ACE.

g. Coordinating Instructions

(1) The ACE Commander may be faced with coordinating widely separated assets during the planning phase for the CAX. For this reason, it is imperative that he be designated and subordinate units be identified, prior to the LOI conference.

(2) The ACE commander is authorized direct liaison with the commanding officer of AGSE and supporting 3d MAW units for the purpose of determining personnel and equipment requirements.

4. CSS Participation. Units conducting training at the Combat Center are expected to provide for their own combat service support in so far as possible. It is recognized that the ability to the MAGTF to provide all required major items of equipment and full spectrum of CSS is constrained by the impracticability of transporting necessary supplies, equipments, and personnel to and from MCAGCC. Accordingly the concept of the CSS includes:

a. CG, MCAGCC, will provide a block of equipment from the Equipment Allowance Pool (EAP) to organizations participating in the CAX. This block is called the standard equipment package (SEP). The contents of the SEP and the personnel augmentation requirements for the EAP will be published to the OSE by A-90. (refer to enclosure (1)).

(1) The SEP is issued to the S-4 of the Command Element of the organization participating in the CAX. Consolidated requests should be made by the Command Element S-4 to the EAP for equipment requirements from subordinate elements. The EAP will issue equipment only to one responsible officer (fieldgrade) assigned by the Command Element S4 by letter or message. The S-4, in turn, may issue this equipment as necessary to subordinate units.

ENCLOSURE (5)

(2) The 1st FSSG provides CSS for the CAX program. The EAP is neither tasked nor equipped to support the CSSE.

(3) The various types of equipment maintained by the EAP will be issued if available. Types and quantities will be discussed at each LOI conference. Due to new equipment fielding over several FY's, the types and quantities will fluctuate until the EAP is fully fielded.

(4) Use of second through fourth echelon repair parts will be made available by the CG, 1st FSSG via Combat Service Support Group-1 (CSSG-1) to all units conducting training.

(5) Limited maintenance support will be provided by CSSG-1, 1st FSSG, for tasks beyond the capabilities of the CSSE supporting the EXFOR/MAGTF. Such tasks will be accomplished on a normal priority and commensurate with local capabilities and workload.

(6) Equipment loaned from the EAP and/or borrowed from organizations will be subject to a joint limited technical inspection (LTI) prior to each exercise to determine current status of supply completeness and maintenance condition. Upon completion of the exercise, the equipment will be cleaned, all first echelon preventive maintenance (PM) completed and it will be reprocessed with a joint LTI. The borrowing unit will be charged for loss/damage or extraordinary wear and tear to equipment and collateral damage.

(7) EAP equipment and equipment borrowed from FMFPAC organizations that cannot be repaired during the exercise period will be repaired after the exercise by the using/borrowing unit or evacuated to the CSSE of the EXFOR/MAGTF, depending on the echelon of maintenance required. If, for extraordinary circumstances, an item of equipment cannot be repaired by the borrowing unit or the MAGTF CSSE, the equipment may be returned to the EAP/owning unit with the repair work incomplete. In such cases, the borrowing unit may be billed by the EAP/owning unit for the completion of repairs. As a matter of policy, return of equipment to the EAP/owning unit with repair work still pending is considered an exceptional situation. Every reasonable effort will be made by the using/borrowing unit or the EXFOR/MAGTF CSSE to complete required repairs prior to return of equipment to the EAP/owning unit. In implementing the above policy, the using/borrowing unit or the CSSE will not be required to remain at MCAGCC more than seven days subsequent to completion of the CAX. At that point, equipment still requiring maintenance will be returned to the EAP/owning unit for further intermediate maintenance action by the EAP or I MEF maintenance activity.

(8) The EAP is not capable of providing aviation peculiar equipment to the EXFOR/MAGTF. Aviation peculiar equipment to maintain full mission capable (FMC) aircraft will be requested by the OCE.

b. EAP Structure and Functioning

(1) The MCAGCC EAP was established as part of the Marine Corps force structure to provide the CG, MCAGCC, with a pool of equipment for use by units participating in CAX's/. The equipment included in the EAP are those items that would be too costly to move to the Combat Center with MAGTF.

(a) T/E 7711 MCAGCC EAP. Equipment is intended for use by FMF units participating in the CAX and by MCAGCC's TEECG, Range Maintenance and EOD units.

(2) Equipment Maintenance. The CG, MCAGCC will manage the EAP through personnel currently authorized to MCAGCC.

ENCLOSURE (5)

(3) CAX Equipment Levels. In order to preclude degrading I MEF readiness through extensive use of its equipment by non-I MEF exercise units, the EA contains sufficient equipment (less aviation peculiarities to accommodate the needs of the MAGTF undergoing training. To assist the OCE in CSS and equipment source planning, the CG, MCAGCC will provide a Standard Equipment Density List (SEDL), MCAGCC funded and unfunded, that units will require for the CAX. This listing, provided at the LOI conference (A-110), constitutes an equipment/funding ceiling that may not be exceeded without approval from CG, MCAGCC (ESD/Compt) and CG MCCDC (T&E). At A-90, the CG, MCAGCC will publish the availability/status of equipment for issue from the Equipment Allowance Pool. The reminder of the SEDL required for a CAX will have to be transported from the Home Base/Station or requested from CG, MARFORPAC.

(4) Equipment Maintenance JON assignment. In FY 96, CG MCAGCC will begin paying SECREP support for the funded portion of the SEDL. At A-7, the OCE will provide a serialized listing of the equipment dentist list that will be used during the CAX. The Head, ESD will randomly select serial numbers equal to the funded SEDL. MCAGCC's job number will be utilized when drawing SECREPS from CSSG-1 for the selected serial number listing.

(5) EAP personnel augmentation. In selected MOS's the equipment allowance pool will require personnel augments for a period of time weeks beginning at the date of initial turn-in equipment to the EAP. At A-90, the Head, ESD will publish a listing of the required personnel and MOS's to the OSE/OCE. These augment personnel are attached (TAD to Headquarters Battalion, MCAGCC) to the ESD.

c. CSS Objectives. While the primary objectives of combat service support will be to help the accomplishment of the EXFOR/MAGTF's training goals, the following additional objectives will be pursued:

(1) Develop, test and evaluate concepts, techniques and procedures for providing combat service support.

(2) Analyze CAX experiences and make appropriate recommendations in post exercise reports for exercise and/or doctrinal adjustments.

(3) Conduct realistic field training for the CSSE.

(4) Review and evaluate the commander's methodology of considering combat service support requirements in his operational planning.

d. CSS Planning Considerations. Determination of equipment requirements to support a CAX will be accomplished by major commands and forwarded to CG, MCAGCC at least 60 days prior to the beginning of the pre-CAX training. For further details see enclosure (3) of Marine Corps Order 3500.11D, Marine Corps Air Ground Combat Center (MCAGCC, Combined Arms Exercise (CAX) Program.

ENCLOSURE (5)

CAX RULES OF ENGAGEMENT/TARGET ARRAY

1. In order to provide the realistic, live-fire training in the coordination and integration of supporting arms, which is the goal of the CAX program, certain rules of engagement have been established. These rules provide maximum training benefit to the exercise force, and allow for effective control and evaluation of the exercise force, and allow for effective control and evaluation of the exercise by the TEECG. Detailed briefings on the rules of engagement will be given at the orientation by TEECG personnel. During the conduct of each CAX, the TEC will serve as the final authority on any questions concerning the rules of engagement/target array.

a. Enemy Scenario. The enemy scenario used in each CAX will be briefed by TEECG personnel at the LOI conference. For some phases of the CAX, the exercise force will be provided detailed enemy force structures and locations, while for other phases, the enemy situation will be developed during the CAX itself in relation to the extend of the exercise force intelligence gathering activities.

b. Enemy portrayal. During the conduct of the CAX, enemy positions, activity and target array will be portrayed in the following manner:

(1) Accurate and timely intelligence of target array locations will be provide by the TEECG.

(2) Target array will be activated to meet the requirements of a specific phase of the CAX.

(3) Enemy elements will be displayed on CAX force success, e.g., remnants of an artillery battery will be displaced because of targeting by the CAX force.

c. Target Array. The actual targets used in the CAX scenario are divided into those representing vehicles of various types and those representing dismounted infantry.

(1) Vehicle will be represented by either stacks of tires 12' wide x 6' high, silhouettes, or in some cases by the Target Holding Mechanism, Tank Gunnery (THGTG).

(2) Dismounted infantry will be represented by white silhouette targets.

d. Target Activation. Targets will be activated either by controllers located with the maneuver elements of the CGS, or by TEECG personnel giving an enemy target location to the exercise force.

NOTE: Exact duties and functions of controllers will be briefed to the exercise force during the pre-CAX period.

(1) Targets are activated when observed by the exercise force or when the exercise force moves within the maximum effective range of the target weapon system.

(2) Target engagement. Targets must be engaged/destroyed by a weapons system that has the real-world capability to destroy the represented target. For example, tanks, BMP's and BRDM's must be engaged by anti-armor weapons in order to be destroyed. Each individual enemy target must be destroyed by the exercise force or that target will continue to be capable of producing casualties. All enemy infantry positions must be cleared by dismounted infantry assaults.

f. Casualty Assessment

(1) Enemy. When enemy vehicular targets are hit by munitions that would destroy the actual vehicles they represent, those targets are considered destroyed. The final judgment on whether a vehicular target has been hit rests with the unit controller or evaluator. Enemy infantry positions will always contain survivors, regardless of the munitions employed against them, however, the enemy's volume of fire will be reduced based on the accuracy of suppressive fires delivered before and during the final assault. The accuracy of exercise force indirect fires and air strikes will be assigned by TEECG personnel and the effect on target will be passed by the controllers. Other factors affecting casualty assessment will be representative artillery rounds, munitions types, and offset artillery and mortar fires due to minimum safe lines.

(2) Exercise Force. Casualties will be assessed on the exercise force based on the inability to suppress or destroy targets/positions that are engaging friendly units. Casualties will be assessed by TEECG personnel and reported through the controllers. Personnel and equipment assessed as casualties will be returned to the parent unit as replacements no later than the end of a particular phase of the CAX.

STANDARD AMMUNITION REQUIREMENTS

1. This enclosure identifies the minimum ammunition necessary for pre-FINEX and FINEX events that are common to all exercise forces participating in a CAX. Pre-FINEX and FINEX ammunition is provided by HQMC and will be on hand when the EXFOR arrives. Ammunition available supply rates (ASR) will be applied to this allocation by the Center Magazine Area.

STANDARD AMMUNITION REQUIREMENTS  
(ACTIVE DUTY)

DODIC NOMEN	410 Inf Bn	410 LAI Co	410A Inf Bn	400 LAI Co	410A LAI Co	MAC Inf Bn	MAC Tank Bn	MAC LAI Co	ASCEX I&II Co	FSCEX I Total	FSCEX II Total	FSCEX III Total	FINEX	TOTAL
A059 5.59 Ball	10000	2000	20000	4000	40800	10500	1800	2100	0	0	0	0	43448	134648
A063 5.56 Tracer	429	0	429	0	1005	600	100	0	0	0	0	0	4463	7026
A064 5.56 Lnk 4:1	16000	2000	21000	4000	32000	10000	1800	2000	0	0	0	0	52200	141000
A131 7.62 Lnk 4:1	5400	2400	10800	4800	18000	8004	1334	4000	0	0	0	0	90454	145192
A131 7.62 Tank Co.	0	0	0	0	0	7200	6000	0	0	0	0	0	45908	59108
A136 7.62 Match	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A576 .50 Lnk 4:1	0	0	0	0	3600	4500	1500	0	0	0	0	0	10000	19600
A976 25mm TPT	0	0	0	0	0	0	0	1000	0	0	0	0	1000	2000
B519 40mm Prac	216	0	432	0	864	54	18	0	0	0	0	0	1080	2664
B535 400mm WSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B576 40mm Lnk TP	0	0	0	0	1160	1152	288	0	0	0	0	0	4000	5600
B643 60mm HE	0	0	0	0	750	180	0	0	0	0	0	0	400	1330
B646 60mm WP	0	0	0	0	72	36	0	0	0	0	0	0	41	149
B647 60mm Illum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C784 120mm TP HEAT	0	0	0	0	0	24	20	0	0	0	0	0	206	250
C785 120mm TP SABOT	0	0	0	0	0	24	20	0	0	0	0	0	206	250
C869 81mm HE w fuze	0	0	0	0	300	60	30	30	130	170	20	50	362	1152
C870 81mm WP w fuze	0	0	0	0	0	30	10	10	35	30	20	20	55	210
C871 81mm Illum	0	0	0	0	0	15	5	5	40	0	0	0	19	84
C995 84mm AT-4	0	0	0	0	27	0	0	4	0	0	0	0	14	45
D505 155mm Illum	0	0	0	0	0	0	0	0	45	0	0	0	34	79
D528 155mm Smk (FW)	0	0	0	0	0	30	10	10	0	0	25	0	25	100
D532 Chrg 155mm S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D533 Chrg 155mm RB	0	0	0	0	0	0	0	0	0	0	0	0	125	125
D540 Chrg 155mm GB	0	0	0	0	0	0	0	0	176	200	0	0	0	376
D541 Chrg 155mm WS	0	0	0	0	0	159	53	53	141	124	137	112	691	1470
D544 155mm HE	0	0	0	0	0	105	35	35	200	300	100	100	672	1547
D550 155mm WP	0	0	0	0	0	24	8	8	72	24	12	12	85	245
D579 155mm RAP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G826 Gren RP Smk	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G578 Fuze Gren Prac	90	0	270	0	990	0	0	0	0	0	0	0	234	684
G895 Hnd Gren Illum	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G930 Hnd Gren HC Smk	9	0	18	0	9	9	3	0	0	0	0	0	27	75

STANDARD AMMUNITION REQUIREMENTS  
(ACTIVE DUTY)

DODIC NOMEN	410 Inf Bn	410 LAI Co	410A Inf Bn	400 LAI Co	410A LAI Co	MAC Inf Bn	MAC Tank Bn	MAC LAI Co	ASCEX I&II Co	FSCEX I Total	FSCEX II Total	FSCEX III Total	FINEX	TOTAL
G940 Hnd Gren Gr Smk	9	2	18	2	9	9	2	2	0	0	0	0	39	92
G945 Hnd Gren Yl Smk	9	2	18	2	9	9	2	2	0	0	0	0	39	92
G950 Hnd Gren Red Smk For Key Personnel Safety														37
HX05 83mm HE (SMAW)	0	0	0	0	9	0	0	3	0	0	0	0	12	24
HX07 83mm Prac SMAW	0	0	9	3	0	0	0	0	0	0	0	0	0	12
J143 Rkt, 5" LC	0	0	0	0	0	3	1	0	0	0	2	0	4	10
K231 Mine AT Prac	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L306 Sig Illum RSC For Key Personnel For Safety														37
L307 Sig Illum WSC	6	0	6	0	6	6	2	0	0	0	0	0	22	48
L311 Sig Illum RSP For Key Personnel For Safety														37
L312 Sig Illum WSP	3	0	3	0	3	3	1	0	0	0	0	0	35	48
L314 Sig Illum GSC	6	1	6	1	6	6	2	2	0	0	0	0	22	52
L323 Smk Red Para For Key Personnel For Safety														19
L324 Smk Grn Para	9	0	9	0	6	6	2	0	0	0	0	0	10	42
M028 Bang Torp Kit	0	0	0	0	9	6	2	0	0	0	0	0	10	27
M032 Chg Demo 1# TNT	0	0	0	0	18	0	0	0	0	0	0	0	40	58
M039 Chg Demo 40#	0	0	0	0	0	0	0	0	0	0	0	0	20	20
M130 Cap Blst Elec	0	0	0	0	48	30	10	0	0	0	0	0	72	160
M421 Chg Demo 40# Shp	0	0	0	0	0	0	0	0	0	0	0	0	20	20
M456 Cord, Det (ft)	0	0	0	0	1500	75	25	0	0	0	0	0	800	2400
M757 Chg Demo C-4	0	0	0	0	6	0	0	0	0	0	0	0	4	10
M913 Chg Demo HE Ln	0	0	0	0	0	0	0	0	0	0	0	0	4	4
N914 Chg Inert Ln	0	0	0	0	0	2	0	0	0	0	2	0	0	2
N289 Fuze, MT	0	0	0	0	0	30	10	10	45	0	25	0	59	179
N340 Fuze, PD	0	0	0	0	0	129	43	43	272	324	112	112	800	1835
N523 Prmer Prec	0	0	0	0	0	165	55	55	320	330	140	115	924	2104
P565 TOW, Prac	0	0	0	0	0	3	1	1	0	0	0	0	0	5
P697 TOW, HE	0	0	0	0	0	0	0	0	0	0	0	0	16	16
PM80 Dragon, HE	0	0	0	0	3	0	0	0	0	0	0	0	6	9



STANDARD AMMUNITION REQUIRMENTS  
(USMCR)

DODIC NOMEN	410 Inf Bn	410A Inf Bn	410 Inf Bn	MAC Inf Bn	MAC Tank Co	ASCEX I Total	FSCEX II Total	FSCEX III Total	FSCEX	FINEX	TOTAL
A059 5.59 Ball	8000	16000	32500	8400	1500	0	0	0	0	34224	100624
A063 5.56 Tracer	200	200	500	500	50	0	0	0	0	3084	4534
A064 5.56 Lnk 4:1	10000	15000	22000	9000	2000	0	0	0	0	50000	108000
A131 7.62 Lnk 4:1	4008	8000	16000	8000	2000	0	0	0	0	72000	110008
A131 7.62 Tank Co.	0	0	0	6200	6000	0	0	0	0	30000	42200
A136 7.62 Match	0	0	50	0	0	0	0	0	0	80	130
A576 .50 Lnk 4:1	0	0	1000	3000	1000	0	0	0	0	9000	14000
A576 .50 Tank Co.	0	0	0	2000	1000	0	0	0	0	5000	8000
B519 40mm Prac	200	350	600	40	10	0	0	0	0	813	2013
B535 400mm WSP	0	0	0	0	0	0	0	0	0	162	162
B576 40mm Lnk TP	0	0	1152	900	100	0	0	0	0	1848	4000
B643 60mm HE	0	0	500	150	0	0	0	0	0	350	1000
B646 60mm WP	0	0	50	20	0	0	0	0	0	21	91
C784 120mm TP HEAT	0	0	0	24	20	0	0	0	0	206	250
C785 120mm TP SABOT	0	0	0	24	20	0	0	0	0	206	250
C869 81mm HE w fuze	0	0	260	60	30	100	100	20	50	283	903
C870 81mm WP w fuze	0	0	0	10	5	10	10	10	10	59	114
C871 81mm Illum	0	0	0	10	5	20	0	0	0	20	55
C995 84mm AT-4	0	0	15	0	0	0	0	0	0	15	30
D505 155mm Illum	0	0	0	0	34	0	0	0	0	30	64
D528 155mm Smk (FW)	0	0	0	30	10	30	0	20	0	20	80
D532 Chrg 155mm GB			(286 Total)								
D533 Chrg 155mm WB			(1303 Total)								
D544 155mm HE	0	0	0	100	30	150	200	100	100	712	1392
D550 155mm WP	0	0	0	10	5	40	20	10	10	67	162
G578 Fuze Gren Prac	90	270	90	0	0	0	0	0	0	234	684
G930 Hnd Gren HC Smk	8	14	8	8	8	2	0	0	0	21	61
G940 Hnd Gren Gr Smk	8	14	8	8	2	0	0	0	0	27	67
G945 Hnd Gren Yl Smk	8	14	8	8	2	0	0	0	0	27	67
G950 Hnd Gren Red Smk For Key Personnel Safety											37
HX05 83mm HE (SMAW)	0	0	6	0	0	0	0	0	0	12	18
HX07 83mm Prac SMAW	0	9	0	0	0	0	0	0	0	0	9
J143 Rkt, 5" LC	0	0	0	1	1	0	0	0	0	4	7

ENCLOSURE (7)

STANDARD AMMUNITION REQUIREMENTS  
(USMCR)

DODIC NOMEN	410 Inf Bn	410A Inf Bn	410 Inf Bn	MAC Inf Bn	MAC Tank Co	ASCEX I Total	FSCEX II Total	FSCEX III Total	FSCEX	FINEX	TOTAL
K231 Mine AT Prac	0	0	0	0	0	0	0	0	0	250	250
L307 Sig Illum WSC	6	6	6	6	2	0	0	0	0	22	48
L311 Sig Illum RSP For Key Personnel For Safety											37
L312 Sig Illum WSP	3	3	3	3	1	0	0	0	0	35	48
L314 Sig Illum GSC	6	6	6	6	2	0	0	0	0	22	48
L323 Smk Red Para For Key Personnel For Safety											19
L324 Smk Grn Para	9	9	6	6	2	0	0	0	0	4	36
M028 Bang Torp Kit	0	0	6	3	1	0	0	0	0	9	19
M032 Chg Demo 1# TNT	0	0	9	0	0	0	0	0	0	16	25
M039 Chg Demo 40#	0	0	0	0	0	0	0	0	0	20	20
M130 Cap Blst Elec	0	0	24	15	5	0	0	0	0	54	98
M421 Chg Demo 40# Shp	0	0	0	0	0	0	0	0	0	20	20
M456 Cord, Det (ft)	0	0	1200	75	25	0	0	0	0	800	2100
M757 Chg Demo C-4	0	0	6	0	0	0	0	0	0	4	10
M913 Chg Demo HE Ln	0	0	0	0	0	0	0	0	0	3	3
N914 Chg Inert Ln	0	0	0	1	1	0	0	0	0	0	2
N289 Fuze, MT			(144 Total)								
N340 Fuze, PD			(1555 Total)								
N523 Prmer Prec			(1784 Total)								
P565 TOW, Prac	0	0	0	3	1	0	0	0	0	1	5
P697 TOW, HE	0	0	0	3	3	0	0	0	0	10	16
PM80 Dragon, HE	0	0	9	0	0	0	0	0	0	0	9

#### CAX TERMS/DEFINITIONS

1. Minimum Safe Separation. Identifies the minimum distance ordnance may impact from Marines. Used by air, direct fire and indirect fire weapon systems.
2. Vertical Interval. Used for direct fire small arms to identify minimum distance rounds may be fired over heads of Marines.
3. Safety Arc. Used to identify area to left and right of gun target line that must be clear of Marines before weapon may fire. Used by Tanks, TOW's, Dragons, SMAW's, LAAW's and Mortars.
4. Safety Officer. Officer who is responsible for all aspects of safety in his designated area.
5. Safety Danger Zone. Segment of range area which is endangered by a particular type of weapon. Consists of a target area, impact area A and area B. Must be made for each mortar.
6. Safety Card. Must be for each mortar. Contains firing unit, type of weapon, authorized projectile, fuse and charge zone, grid location of firing position, azimuth of left and right limit of fire, minimum and maximum range and elevation, any special instructions.
7. Safety Diagram. A graphic portrayal of data on safety card. Must be made for each mortar firing position.
8. Backblast Primary Danger Zone. Area to rear of recoilless weapons (TOW's, Dragons, SMAW's, AT-4s) in which personnel in area may receive fatal injuries. Gunners must ensure area is clear prior to firing.
9. Backblast Caution Zone. Area to rear of recoilless weapons in which personnel in area may receive injuries.
10. Weather Minimum. Used by air to identify if weather is clear enough to run air operations.
11. Wings Level. Used by pilots of attacking aircraft to ensure air controller knows aircraft is ready to drop ordnance.
12. Cleared Hot. Positive term used by air controller to allow pilot of attacking aircraft to drop ordnance.
13. Defensive Fire Plan Sketch. Required of each company on the Mobile Assault Course and the battalion on the FINEX.
14. Cease Fire. May be called by anyone to stop all firing if unsafe condition is noticed. Red pyrotechnic may be employed to initiate a cease fire.
15. Emergency Stop Exercise. May be called by an person to cease all fire and movement in the exercise force. Fire may resume only when authorized by TTECG and the EXFOR/MAGTF chain of command. Red pyrotechnics are used in conjunction with voice command over radio.
16. Cease Loading. Ceases artillery firing after expending loaded rounds.
17. Checkfiring. Only used by indirect fire agencies to stop all firing.
18. Abort. Directs pilots of attacking aircraft to terminate the attack and to cease fire.

